

INTERNATIONAL SEARCH REPORT

 Internatⁿ application No
 PCT/L J3/03190

 A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 G01N33/58 C09B15/00 C07K7/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

 Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 G01N C09B C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, CHEM ABS Data, MEDLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 835 139 A (PFISTER J ET AL) 10 September 1974 (1974-09-10) example 13	1
Y	FALLER T ET AL: "A novel acridone derivative for the fluorescence tagging and mass spectrometric sequencing of peptides" CHEMICAL COMMUNICATIONS, ROYAL SOCIETY OF CHEMISTRY, GB, vol. 16, 1997, pages 1529-1530, XP002251180 ISSN: 1359-7345 page 1529, left-hand column, the last three paragraphs --- -/---	1-20

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

27 October 2003

Date of mailing of the international search report

10/11/2003

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	SCHULER BENJAMIN ET AL: "Specific labeling of polypeptides at amino-terminal cysteine residues using Cy5-benzyl thioester." BIOCONJUGATE CHEMISTRY. UNITED STATES 2002 SEP-OCT, vol. 13, no. 5, 18 July 2002 (2002-07-18), pages 1039-1043, XP002259205 ISSN: 1043-1802 cited in the application abstract; page 1039, right-hand column, first paragraph; schemes 1 and 2 ----	1-20
P,Y	WO 02 099424 A (AMERSHAM BIOSCIENCES UK LTD ;WEST RICHARD MARTIN (GB); SMITH JOHN) 12 December 2002 (2002-12-12) claims 1,7,11,13,27-29 ----	1-11, 13-20
P,Y	WO 02 099432 A (AMERSHAM BIOSCIENCES UK LTD ;SMITH JOHN ANTHONY (GB)) 12 December 2002 (2002-12-12) claims 1,6,9,11,27-29 ----	1-10, 12-20
A	KLEIN G ET AL: "A fluorescent metal sensor based macrocyclic chelation" CHEMICAL COMMUNICATIONS, CHEMICAL SOCIETY, LONDON, GB, vol. 7, no. 6, 21 March 2001 (2001-03-21), pages 561-562, XP002227157 ISSN: 0009-241X abstract; scheme 1 ----	12
A	EP 0 857 721 A (EISAI CO LTD) 12 August 1998 (1998-08-12) production example 9; examples 1,2; table 5 -----	1

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 1,7,11-14 (all partially)
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 1,7,11-14 (all partially)

Present claim 1 relates to an acridone or quinacridone dye containing a target bonding group, which is partially defined by reference to a desirable characteristic or property, namely its reaction with a thioester.

Claims 1, 7 and 11-14 cover all compounds, whose target bonding group has this characteristic or property, whereas the application provides support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT for only a very limited number of such compounds. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 6 PCT). An attempt is made to define the compound by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible. Consequently, the search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely those parts relating to the acridone or quinacridone dyes, whose target bonding group is a carboxylic acid thioester group (as clearly defined in independent claim 1) or is a 1,2-aminothiol group (see for example claims 2 and 10).

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3835139	A	10-09-1974	GB 1417201 A	10-12-1975
			US 3886162 A	27-05-1975
WO 02099424	A	12-12-2002	WO 02099424 A2	12-12-2002
WO 02099432	A	12-12-2002	WO 02099432 A2	12-12-2002
EP 0857721	A	12-08-1998	AU 7145396 A	28-04-1997
			EP 0857721 A1	12-08-1998
			CA 2233643 A1	10-04-1997
			WO 9712872 A1	10-04-1997
			JP 9249650 A	22-09-1997